



UNDP GLOBAL CENTRE FOR TECHNOLOGY,
INNOVATION AND SUSTAINABLE DEVELOPMENT,
SINGAPORE

@UNDPTECH

COVID-19 DETECT AND PROTECT CHALLENGE

The COVID-19 pandemic has the potential to be even more devastating in the developing world. Here, healthcare systems are often stretched or unavailable, whilst bustling informal economies make social distancing a particular challenge. The disease may also worsen existing inequalities, and exacerbate poverty or other issues.

Against this backdrop, the Global Centre has focused on shaping a global effort to drive local, urgent, and applicable innovation – and getting these solutions to the areas that need them most. We partnered with Hackster, the world's largest developer community, on a global open-source innovation initiative: the **COVID-19 Detect and Protect Challenge**. This challenge called on innovators from across the world to develop open-source, low-cost inventions that could be implemented in developing countries to support their response and recovery efforts to COVID-19.



**Crowdsourcing
frugal innovation,
at speed,
to respond to
COVID-19**

OUR PARTNERS



PARTICIPANT COUNTRIES



350+
SUBMISSIONS

> 60
COUNTRIES

45%
PARTICIPANTS
FROM LOW-
& LOWER-MIDDLE
INCOME COUNTRIES

KEY ELEMENTS OF THE CHALLENGE

In an unprecedented and fast-moving pandemic, the Challenge was designed so innovation could reach communities that needed it most.



FOCUS ON GLOBAL TALENT & EXPERTISE

The Challenge was about bringing global hardware development expertise and innovation down to the local level. This included leveraging the collective expertise of the international innovation community, made up of makers, inventors, entrepreneurs, scientists, and researchers, and hobbyists. The challenge became a truly democratised effort.



LOW-COST, LOW-TECH, & OPEN-SOURCE SOLUTIONS

Solutions needed to be applicable and replicable, in low-resource settings. All submissions had to be made with easily available components. They also had to include underlying code, design files, schematics, or circuit boards, and detailed instructions, to allow anyone to build them – and with no IP-hold, so as to remove any barriers to usage and implementation.



BEING AGILE, ITERATIVE, & RESPONSIVE

Moving quickly was crucial, particularly to respond to the evolving nature of COVID-19. The Challenge featured rolling deadlines in order to identify promising solutions quickly. Rotating panels of experts – from the tech, development and healthcare communities – evaluated solutions as they were submitted. Weekly Impact Winners were announced, with solutions promoted across countries.

GOING FROM GLOBAL TO LOCAL

Recognising that innovation could not remain online or in the abstract, an approach to implement global innovation at the local level was shaped.



SHAPING A NEW WAY OF WORKING

In partnership with the UNDP Accelerator Labs community, an initial cohort of seven countries were identified: Egypt, Ghana, Kenya, South Africa, Sri Lanka, Tanzania, and Uganda. These countries were selected as they have strong local innovation ecosystems which could provide a space for initial testing and implementation efforts to then scale up across other countries.



PARTNERING WITH LOCAL INNOVATORS

Tools and materials provided by tech partners – from 3D-printers, and priority components – were shipped to maker spaces and innovation hubs in each of the initial target countries. These partners, in collaboration with local UNDP Accelerator Labs, mobilised innovation response teams to build and refine relevant solutions from the Challenge.



THINKING BEYOND THE CHALLENGE

Technology and innovation will play an important role in driving COVID-19 recovery. The Challenge, in a small way, is also about supporting and catalysing local innovation ecosystems – from building micro-supply chains, through to developing hardware skills, and providing open-source products that could be made and sold locally.

EMERGING THOUGHTS

The Challenge has seen submissions from more than 50 countries, with many coming from developing countries. This highlights the global nature of innovation, but also the importance of engaging, supporting, and mobilising local communities to build, refine, and implement solutions that best meet their needs – regardless of the challenges faced.

This model – moving from global crowdsourcing, through to local implementation – is still very much being explored by the Global Centre and partners. In the spirit of open-source, it should be adapted, built on,

and refined to address other challenges.

However, regardless of its structure, the time for global collaboration - coupled with local action - is now. COVID-19 is the latest in a long-list of unprecedented and truly global challenges, none of which can be tackled by a single community or country. The Global Centre for Technology, Innovation and Sustainable Development is working to address these challenges – through convening partners, applying technical expertise, and identifying and implementing promising innovation. Join us!

LET'S
COLLABORATE

We are **actively seeking partners** to work with us on using digital and technology to tackle global issues. Get in touch:

✉ REGISTRY.SG@UNDP.ORG

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